

nih record



ABOVE • NIH Chamber Singers on key for upcoming holiday performances. See story on p. 16.

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Global Recruitment Effort Gets Boost from ARRA

By Carla Garnett

Like several of NIH's internal communities, the Office of Human Resources flourished as a result of ARRA funds. From unprecedented crowds entertained at local job fairs to an unusually robust influx of rehired retirees, NIH corporate recruitment efforts surged past expectations in fiscal year 2009. And sensing a unique opportunity to reinvent crucial work relations, OHR rose to meet the challenge.

"OHR recognized that ARRA was going to mean a tremendous workload for the NIH," said Chris Major, OHR director. "We created a special team to launch global recruitments for the most urgently needed jobs and tied them to our advertising campaign to promote them. ARRA was a great opportunity for OHR to provide a coordinated response to best meet the human capital needs of our customers."



NIH recruiter Chris Pugh (r) greets attendees in front of the agency's booth at a federal job fair.

SEE RECRUITMENT, PAGE 6



COPR members gather in front of Bldg. 1.

NIH Holds First 'Engaging the Public in Research' Week

By Jan Ehrman

NIH leaders, members of the NIH Director's Council of Public Representatives (COPR) and grantees recently participated in a week-long series of events comprising the inaugural "Engaging the Public in Research Week," Oct. 26-30 on campus.

While NIH has long conducted and supported community-based research—two of the most prominent investigations being the Framingham Heart Study and the Nurses Health

SEE PUBLIC, PAGE 8

Lions, Tigers & Bullies Sapolsky Limns Science of Stress, Bane of Neurons

By Rich McManus

Whether you are an olive baboon luxuriating on the savannas of Africa or a middle-aged policy wonk buried midlevel in Foggy Bottom, stress is going to enter your life in virtually similar chemical ways. But one's physiological makeup largely determines whether the stress of either life ultimately proves invigorating or withering.

The fact that a large crowd turned out Oct. 28 for Dr. Robert Sapolsky of Stanford's talk on "Stress and Health: From Molecules to Society," prompted NIH director Dr. Francis Collins, who introduced this year's Florence S. Mahoney Lecture on Aging, to quip, "Maybe people at NIH are interested in stress—I'm sure I don't know why."



Dr. Robert Sapolsky

SEE STRESS, PAGE 4



The NIH Record is recyclable as office white paper.



briefs

Author Jolley To Speak at DDM Seminar

The Deputy Director for Management (DDM) announces the first DDM seminar of the 2009-2010 series "Management and Science: Partnering for Excellence." The event on Thursday, Dec. 3 from 11 a.m. to 12:30 p.m. in Masur Auditorium, Bldg. 10, will feature Willie Jolley, author of *It Only Takes a Minute to Change Your Life* and *A Setback is a Setup for a Comeback*. His presentation will focus on key strategies for organizational success.

Videocasting and sign language will be provided. Individuals who need reasonable accommodation to attend should call (301) 496-6211 or the Federal Relay Service at 1-800-877-8339.

For more information about the series, visit www.ddmseries.od.nih.gov or call (301) 496-3271.

Year Ends with Multiple Lectures

Dr. Tobias Meyer will present a Wednesday Afternoon Lecture on Dec. 2 at 3 p.m. in Masur Auditorium, Bldg. 10. A professor in the department of chemical and systems biology at Stanford University School of Medicine, he will present "Shotgun siRNA Perturbation to Dissect Growth Factor Triggered Proliferation and Migration Signaling Systems."

Dr. Juan Bonifacio will present the annual G. Burroughs Mider Lecture on Thursday, Dec. 3 at 3 p.m. in Masur. Head of the Cell Biology and Metabolism Program, NICHD, and an NIH distinguished investigator, Bonafacio will present "Sorting It All Out: Signal-mediated Protein Trafficking in the Endosomal-Lysosomal System."

Dr. Gerard Karsenty will present a Director's Lecture as part of the Wednesday Afternoon Lecture Series on Dec. 9 at 3 p.m. in Masur. The Paul A. Marks, M.D., professor and chairman of the department of genetics and development at Columbia University Medical Center, he will present "The Novel Physiology of Bone."

For more information, contact Sarah Freeman at sarah.freeman@nih.gov or (301) 594-6747.

Zerhouni Named Science Envoy

Former NIH director Dr. Elias Zerhouni was recently named a U.S. science envoy by U.S. Department of State Secretary Hillary Clinton. Zerhouni is also a senior fellow at the Bill & Melinda Gates Foundation's Global Health Program and chief scientific advisor for the journal *Science Translational Medicine*.

Zerhouni is one of three prominent U.S. scientists that Clinton named as science and technology envoys during a speech given Nov. 3 in Marrakech, Morocco. The envoys are to arrange scientific collaborations between the U.S. and countries in North Africa, the Middle East and in south and southeast Asia. The other envoys are Nobel laureate Dr. Ahmed Zewail, professor of chemistry and physics at Caltech, and Dr. Bruce Alberts, former president of the National Academy of Sciences.

"We want to help Muslim majority communities develop the capacity to meet economic, social and ecological challenges through science, technology and innovation," Clinton said. The envoys will be supported by new embassy officers who will also engage with international partners on the full range of environmental, scientific and health issues, from climate change and the protection of oceans and wildlife to cooperation on satellites and global positioning systems, according to the State Department.

Last May, Zerhouni was named a senior advisor to Johns Hopkins Medicine; he had been executive vice dean at that institution prior to being named NIH director in May 2002.

Zerhouni now serves on the boards of the Lasker Foundation, Research!America, the King Abdullah University of Science and Technology and the Mayo Clinic Foundation. He also serves as an external chief advisor for global science and technology for Sanofi-Aventis and was named chair of the Maryland Economic Development Commission in April 2009. He was elected a member of the Institute of Medicine of the National Academy of Sciences in 2000.

NCCAM Holds 10th Anniversary Symposium

On Tuesday, Dec. 8, the National Center for Complementary and Alternative Medicine will hold its 10th Anniversary Research Symposium: Exploring the Science of Complementary and Alternative Medicine. The symposium features speakers on natural products and mind-body medicine. The keynote address will be given by Dr. Susan Folkman on the topic, "Stress, Coping and Well-Being: Behavioral Science Meets Integrative Medicine."

The symposium is from 9 a.m. to 4:15 p.m. in Masur Auditorium, Bldg. 10. The event is open to everyone and registration is not required. It will be videocast at <http://videocast.nih.gov/>.



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NIH's new ReadyCam studio makes doing interviews—even several in a row—a snap. Just ask frequent user NIAID director Dr. Anthony Fauci, one of the nation's foremost flu experts, who can appear on numerous news outlets—as shown above—without leaving campus.

Lights, Camera, Action! ReadyCam Facility Delivers on Convenience

By Valerie Lambros

At the height of H1N1 media hunger and on the days following the release of data from the Thai HIV vaccine trial, you probably saw NIAID director Dr. Anthony Fauci on the news a lot.

However, Fauci didn't have to travel all over town to meet with reporters. They came to him. Or, more accurately, they linked to him.

"You could have six or so interviews on any day and to go to that many places all over town would be physically impossible," Fauci said. "Particularly when you get a situation in which you have intense media interest in a subject."

What makes this connection to local, national and even international news media possible is NIH's new ReadyCam studio located on the first floor of Bldg. 31A. It might not look like Hollywood—just some metal cabinets filled with high-tech equipment and wires, a video camera, a set of three studio lights, a wide-screen TV backdrop and an office chair—but what it does is extraordinary.

The Office of Communications and Public Liaison, which made the ReadyCam concept ready for primetime at NIH, has one major goal for the new setup: Make NIH research information, investigators and expertise available to the public as quickly and easily as possible.

"The impetus for the facility was our need to push information out to the news media from a central location on campus, rather than have news outlets come to us," said Calvin Jackson, chief of OCPL's News Media Branch. "Also, with staff reductions, it was becoming increasingly difficult and expensive for news outlets to hire crews. This facility was also one of the last major pieces in the NIH Continuity of Operations Plan. If a major crisis were to occur, the facility could easily be used to supply media outlets with continuous information."



The News Media Branch had the facility built and runs the show.

Here's how it works: when it's time to go on the air, the interviewee arrives at the small, windowless room and an appropriate backdrop to be used for the segment is selected. Then a contractor, located off-site in Newton, Mass., turns everything on as the guest sits in the chair, puts in an earpiece, attaches a microphone, looks into the camera and begins the interview. The contractor remotely focuses the camera, operates the studio lights and does the legwork of connecting the studio guest to the news media outlet that wants access. This makes doing interviews—even many of them in a row—a snap.

"It's been absolutely invaluable to do the media that we've needed to do," Fauci said. "At the same time, it hasn't disrupted my

workday. It's been in many respects a lifesaver."

Fauci recounted a time before the studio was up and running that he had to go downtown to do an interview with CNN. After leaving his office, getting on the Metro, taking the train to Union Station and then finally arriving at CNN, the time he actually spent in the interview chair was 4 minutes. He then turned around and came back to NIH.

"I had blown 2½ hours for a 4-minute interview," he said. Now it takes all of 3 minutes to get from his office to the studio and most of that time is waiting for the elevator. "So this little room we have is amazingly convenient."

The ReadyCam studio opened for business in June and has steadily gained use. "As soon as this was ready, the news about H1N1 started coming out, along with the HIV study," recalls Jackson. "We jumped in and said 'Let's see if this thing works.' We needed to have a facility that could handle the demand."

Most of the traffic, unsurprisingly, has involved Fauci. For access to him, outlets pay a fee to the contractor, which locks in broadcasting time, connects with the news station and turns on all the equipment. And while the convenience would seem to benefit the interviewed guests, it's also a win for TV news outlets. With the studio delivering the same quality video as a team of in-person pros, news agencies don't have to spend the time and manpower needed to capture the film themselves.

NIH joins other organizations such as Harvard University and the *Washington Times*, as well as pollster Scott Rasmussen, as users of the remote video technology. Most groups use their studios once a week, but NIH has been known to use its facility daily, sometimes several times a day.

With all this action, Jackson has received the green light to upgrade the studio's camera to a high-definition model. Sound dampening panels have also been installed to insulate the room from neighboring offices.

"We have only begun to scratch the surface of what this facility can do," Jackson said. "In addition to live or taped remote interviews, the facility can also be used for satellite media tours, remote meeting presentations and webcasting."

For more information about the studio, contact the News Media Branch at (301) 496-5787. 📞

STRESS

CONTINUED FROM PAGE 1



Right:

Sapolsky lingered after his lecture for a reception in the south lobby of the CRC, where attendees asked questions and enjoyed refreshments.

The problem with us humans, Sapolsky noted dryly, is that “we spend 75 years having our bodies go to hell on us.” Unlike most mammals, whose lives are cut short either by predators, or more likely by tainted food or drink, “humans die slowly due to an accumulation of damage.” But why, he asked, do some last to 85 and others only to 50?

A person’s psychological makeup is important, as is social status and how one behaves when feeling unloved, Sapolsky explained. All involve how we handle stress, which has been proven to worsen any number of human ailments.

Seven decades of neuroscience have demonstrated how stress works: down at the far end of the hypothalamic-pituitary-adrenal axis, hormones known as glucocorticoids (GCs, including corticosterone and hydrocortisone) exert their effect on hippocampal neurons. Like most of life’s powerful elements, however, GCs are a double-edged sword: while they are essential for life (the adaptive stress response helps you run away from the unleashed hound, mobilizing energy, increasing cardiovascular tone, suppressing digestion and sharpening cognition), they can also produce such stress-related disorders as myopathy, fatigue, hypertension and impotence. It does a body no good, Sapolsky suggested, when GCs ramp up not in response to the bared fang, but to the ambivalent hallway social interaction, the plumber who shows up 2 hours late, the spouse whose text messages divulge a straying partner.

Stress produces neuron atrophy and loss in the hippocampus, actually aging it. Sapolsky and his colleagues have shown that a neuronal “energy crisis” is what ultimately undoes the neuron, regardless of upstream cause, be it stroke, Alzheimer’s, AIDS or depression.

“Neurons suffer energy collapse,” he said, and glucose uptake is inhibited. Neurons themselves have defenses, he continued, “but these too are weakened by glucocorticoids.” It turns out that GCs, long thought, like other steroids, to be anti-inflammatory, are actually pro-inflammatory in some parts of the brain after an abrupt injury, Sapolsky said.

Seeking strategies to bolster neurons, his team has investigated the use of drugs to inhibit the genesis of steroids, in addition to blocking GC receptors. It would also make sense to counter neuronal energy loss by supplementing with excess energy, using mannose and ketones.

None of these avenues struck Sapolsky’s team as more promising than their effort of the past

decade to “build a better neuron.” They are using gene therapy to induce over-expression of a variety of different genes that have the potential for protecting the nervous system from stress and from neurological insults. The delivery vector they chose is herpesvirus. They engineered a version that is stress-responsive, thus it kicks in just when it is needed—in response to stress.

The Stanford team made a family of three genes to insert, including an artificial gene that binds GCs but acts as if it had bound estrogen, which has a variety of beneficial effects in the nervous system.

Regarded as a potential therapy for psychiatric disorders, the gene therapy strategy is, of course, only testable in tissue culture and experimental animals so far; there are problems with delivery and safety, Sapolsky noted. “We are lurching in the right direction,” he said, then showed a slide depicting how high the clinical Matterhorn now looms: the vector penetrates far too feebly into human brain tissue at present.

The last quarter of Sapolsky’s 70-minute presentation reviewed the accumulated insights of his past 31 summers studying baboons, chiefly males, in Africa. The goal of his observation is to determine why the stress response differs from person to person. Which animals, in a mammalian society, suffer stress damage?

Since baboons only spend 3 hours a day gathering food, that leaves 9 daylight hours for social she-nanigans. “Like us,” Sapolsky noted, “they have the luxury of generating psychosocial stress.”

He found that social rank is “a very powerfully organizing feature of their society—it stabilizes their world.” Baboon life, it turns out, is amok with “high rates of violence and threats of violence” but there also exists a subtle savvy in the way violence is used and avoided. The males that end up attaining high rank tend to be as much diplomats as brawlers; personality and personal experience are crucial to success among these hairy politicians.

Sapolsky delighted in taking the packed hall to the verge of existential abysses then back to therapeutic promise, but he did offer an observation that every baboon in the hall should find useful: social isolation is the single biggest predictor of high stress. If you’re a hurtin’ monkey, don’t bear your sorrows alone. 12



Jill Kelly (l) speaks with Stephen Monaco (r) of Woodbridge, Va. Monaco has isovaleric acidemia, an inability to process the amino acid leucine. Because the disorder was not diagnosed at birth, he experienced severe neurological damage. In back (clockwise, from l) are former quarterback Jim Kelly, NICHD deputy director Dr. Yvonne Maddox, and Stephen's sister, Caroline. Caroline was diagnosed with isovaleric acidemia before birth at an NICHD research center. Early treatment prevented the neurological damage experienced by her brother. The Monaco children attended the event with their mother, Jana Monaco, an outspoken advocate for newborn screening research.

NICHD Starts Newborn Screening Research Program

NICHD officials recently inaugurated a research program to enhance newborn screening. As directed by Congress, the program was named in honor of National Football League Hall-of-Fame quarterback Jim Kelly, formerly of the Buffalo Bills.

Newborn screening involves routine diagnostic testing to identify serious, often fatal, disorders at birth, so that these disorders can be treated. The tests usually involve analyzing a sample of blood, taken from an infant's heel. Authorized by the Newborn Screening Saves Lives Act, the Hunter Kelly Newborn Screening Research program seeks to carry out, coordinate and expand research in newborn screening. The program also supports research to increase the number of conditions that can be diagnosed at birth, to understand the long term effects of living with these conditions and to foster the development of new treatments.

"It is fitting that the NICHD's research program in newborn screening bears Hunter Kelly's name," said Dr. Susan Shurin, acting NICHD director. "Through the foundation estab-

lished in his memory, Hunter's family has increased awareness of the need for research to expand newborn screening and worked tirelessly to ensure that routine newborn screening and treatment can be expanded to cover a far greater number of disorders than is possible today."

Jim Kelly explained that when his son was diagnosed at the age of 4 months with Krabbe disease, a rare, fatal genetic disorder affecting the nervous system, he was devastated by the news and was not inclined to talk about Hunter's diagnosis with anyone. He said his wife, Jill, disagreed and urged him to use his celebrity status to foster public awareness of the disorder.

"We knew that we couldn't sit back and watch other kids with other diseases suffer like ours did," he said.

The Kellys and their family members established the Hunter's Hope Foundation to raise awareness and fund research for Krabbe disease and related disorders (known as leukodystrophies) and to support families affected by these conditions. The foundation also advocates for expanded and universal newborn screening for all possible diseases.

An HHS-led effort to standardize newborn screening across the states began in 2001, said Dr. R. Rodney Howell, special assistant to Shurin and chair of the HHS advisory committee on heritable disorders in newborns and children. The Health Resources and Services Administration convened an expert group to evaluate available research evidence on newborn screening and to make recommendations.

The panel recommended screening for 29 primary conditions for which treatment is currently available and what it referred to as 25 secondary target conditions. These are conditions for which diagnostic tests are available, but for which treatments are generally not. Today, the majority of states screen for the 29 primary conditions.

In 2007, more than 4.2 million U.S. infants underwent newborn screening, Howell added, citing statistics from the National Newborn Screening and Genetics Resource Center. Of these, a total of 4,220 infants were diagnosed with significant hearing defects and another 7,189 infants were diagnosed with biochemical abnormalities or defects in the blood protein, hemoglobin, totaling more than 11,400 infants. Like vaccination, newborn screening has an extremely advantageous cost-benefit ratio, Howell said.

NIH newborn screening research seeks to expand the number of conditions for which screening and treatment are available. Howell said that studies conducted under the authority of the Hunter Kelly Newborn Screening Research Program will include research to identify new screening technologies as well as on managing conditions that can be detected through screening.

NICHD also recently funded the Newborn Screening Translational Research Network Coordinating Center, to provide infrastructure support for newborn screening researchers to investigate potential candidate conditions for screening, to identify new screening tools and to develop potential treatments for these disorders. ●

RECRUITMENT

CONTINUED FROM PAGE 1

Above:

Perfect storm? Several factors—an influx of ARRA funding, a sluggish national economy and rising unemployment rates—combined to provide a favorable atmosphere for hiring at NIH. Recruiting potential employees at a recent job fair are (from l) Krishawn Demby, Sara Prather and Ed Langford, all of the Office of Human Resources.

Below:

OHR's Langford (r) answers questions about working at NIH.



Fishing with Wider Net, Less Waiting

“Creating a partnership climate between OHR and the ICs has always been at the core of OHR’s work,” noted project team leader Cheryl Wild of the Client Services Division. “ARRA afforded us the perfect opportunity to enhance our ongoing collaborations with the ICs through ‘global recruitment’ efforts.”

Global recruitment simplifies the hiring process, in effect allowing OHR to cast a wider net for employees in a larger applicant pool, streamlining resources and getting results faster.

For example, say NIH realizes it will need about 15 biologists across ICs. Global recruitment lets the agency post one general vacancy announcement for the position. That one posting might lure hundreds of potential hires, from which several ICs can each interview and make their selections. Normally, each vacancy requires a separate announcement from each IC and the pool of certified eligible applicants cannot be shared.

Less paperwork and shorter waiting time to hire, you say? ICs jumped at the chance. So did prospective employees. According to Wild, OHR global recruitment bore fruit quickly, particularly for several positions: grants management specialists, health scientist administrators and program analysts.

The grants management specialist post garnered 271 applications. Nine ICs expressed interest in the GMS vacancy. ICs hired 8—5 ARRA and 3 non-ARRA.

The HSA position pooled 541 applications. A total of 18 ICs showed interest. There have been 20 hires made so far, 1 ARRA and 19 non-ARRA.

The program analyst job received 490 applications and 15 ICs looked into it. One ARRA and 8 non-ARRA hires were made.

ARRA Ripple Effect

In addition, NIH experienced a ripple effect in other staffing needs: The success of the ARRA campaign resulted in another global recruitment effort, which is under way for contract specialists. To date, 5 employees have been hired by 4 ICs, Wild estimated. One of those may fall under ARRA. The vacancy listing



fetched 533 applications.

“Although sharing a certificate of eligibles within the same office is not unheard of, sharing it across what are essentially 27 different organizations is extraordinary,” Wild explained. “The global recruitment effort has enabled OHR to create effective ‘intra-IC’ partnerships and reduce the number of announcements posted for the same position. These changes shorten the time managers must dedicate to the hiring effort. We have increased our customer service and outreach efforts, which have both led to a greater pool of qualified applicants.”

There have been 35 hires through global recruitment so far—7 of which fall into the ARRA category, she continued. Lists of qualified applicants for all the global recruitments were extended at the request of IC hiring managers, who continue to use the certificates to fill new vacancies as they surface. “ICs and applicants alike have given tremendous positive feedback regarding the global recruitment campaign,” Wild said.

In a note to Major, Sheryl Brining, director of NCRR’s Office of Review, expressed “enthusiastic support for the approach of issuing an omnibus announcement for NIH HSA positions. This approach has saved valuable time and resources that I can now spend furthering extramural research.”

Climate, a Key Collaborator Too

Of course the nation’s economy and unemployment conditions contributed to the successful recruitment season as well. Turnout, usually in the low hundreds for similar events, reached unprecedented levels (thousands) at several job fairs NIH attended last spring. At fairs in April, for example, NIH drew from about 100 to 450 people at such sites as Mount St. Mary’s College and Bowie State University. By May, agency recruiters were seeing 3,000-plus. A fair in Loudoun County hosted by Congressman Frank Wolf (R-VA) drew at least that many; an event in Howard County, Md., actually closed down road traffic temporarily in Clarksville as job seekers flocked to the federal fair.

Specifically, “our goal was to attract knowledgeable, motivated candidates for critical Title 5 non-SES NIH positions,” explained NIH

recruiter Chris Pugh, who coordinates job fair participation within OHR. "I was surprised by the overall turnout of attendees...These events are very productive for branding NIH as an 'employer of choice.' They're also ideal for global recruitment."

Retired, but Rehired

As ARRA funding boosted the number of grants NIH could offer (and thus, spurred a need for more grant reviewers), OHR and its hiring infrastructure had to respond quickly.

"We needed some experienced people so we could hit the ground running," said David Uejio, special assistant to Major. "Who better to do that than our recent retirees?"

To find workers in the needed series, OHR used a database of federal workers who had retired within the last few years. NIH sent a letter to about 200 or so former employees, asking whether they were interested in returning to work.

"The response was beyond what we expected," Uejio admitted. "We received 82 resumés from people who had worked at NIH, as well as several from former employees of other agencies." Over the last few months, 8 retirees were rehired in 7 ICs.

Time to Streamline

OHR, also wanting to streamline hiring, applied to the Office of Personnel Management for direct-hire authority for positions of critical need.

"We're not tone-deaf to the criticism," Uejio said. "We also want to make the hiring process faster. We want to expedite the process as much as everyone else."

In response, OPM relaxed a couple of its regulations due to the unique circumstances provided by ARRA and OHR gladly seized the moment.

"This has been a huge human capital opportunity," Uejio concluded. "When we first realized ARRA might benefit NIH, our first thoughts were, 'How can we support this initiative most effectively? What communities do we need to talk to?' It was a basic needs-assessment exercise aligned with an outstanding customer service focus. We sought to reach out to various scientific communities and find a quicker way to support their hiring needs. OHR and the special project team for ARRA worked hard to ensure that the advantages of this new funding were realized by filling critical positions quickly with highly qualified candidates who continue to support the NIH mission." ●



NINR director Dr. Patricia Grady (c) meets with Dr. Meredith Bond (l), chair of the department of physiology at the University of Maryland School of Medicine, and nursing school dean Dr. Janet D. Allan.

Grady Presents Keynote at U-Md. Celebration

In celebration of the 30th anniversary of its Ph.D. program, the University of Maryland School of Nursing invited a distinguished alumna and former faculty member—NINR director Dr. Patricia Grady—to deliver a keynote address. In her speech, "Translating Research into Action: Bridging the Gap," Grady noted, "It is a great pleasure to share this remarkable occasion, as well as to have the opportunity to exchange insights into the translational research that bridges the gap from bench to bedside. I was at the University of Maryland when the Ph.D. program was established, and I am delighted to see that it continues to expand and innovate."

The school has a total enrollment of over 1,700 students and educates more than 40 percent of the nurses working in the state of Maryland. Its research program, with 65 current Ph.D. students and more than 80 doctorally prepared faculty members, received \$6.5 million in extramural research funding in 2008 for projects in areas such as cancer prevention and symptom management; cardiovascular health, gerontology and aging; end-of-life care; substance abuse prevention and treatment; and exercise and nutrition effects in HIV-infected populations. It also has a new NINR-funded Center for Pain Studies, headed by former NINR K22 fellow Dr. Susan Dorsey.

Grady spoke about Dorsey's ongoing research project on pain induced by HIV medications. Using a mouse model, Dorsey's team is exploring how genetic expression, protein levels and pain responses change over time during the administration of certain antiretroviral agents. "Such research may lead to the identification of treatment interventions to manage the symptoms of painful peripheral neuropathy in HIV/AIDS patients. Interdisciplinary research like this is helping to bridge the gap between research and practice," Grady noted. "Pioneering programs of your school in nursing informatics, global health, education and training and leading-edge technologies provide invaluable resources to the university, the scientific community and beyond." —Ray Bingham



PUBLIC

CONTINUED FROM PAGE 1

Above, l: Speakers at the STEP forum included (from l) Dr. Sarah Gehlert, Dr. Syed Ahmed, Ann-Gel Palermo, Dr. Francesco Celi, Dr. Lisa Rey Thomas and Dr. Claudia Baquet.

Above, r: Dr. Howard Koh, HHS assistant secretary for health, told NIH grantees and other attendees at the Partners in Research workshop that “working with communities in partnerships is where we must go in this country.”

Below: Dr. Julianne M. O’Daniel (r) of Duke University discusses her poster “Genome Diner: A Strategy for Community-Research Engagement in Genome Sciences,” with Dr. Yvonne Maddox, NICHD deputy director.

PHOTOS: BILL BRANSON, ERNIE BRANSON, DAVID BANKS

Study—increased emphasis has been placed recently on the need to merge the research interests of investigators with health and wellness issues affecting those in the community. The ultimate goal of these studies, speakers at the event noted, is to improve the health of everyone—both in this country and abroad.

“We at NIH firmly believe that engaging the public [in research] is not merely an option, but a necessity,” said Dr. Patricia Grady, director of the National Institute of Nursing Research, at the Partners in Research (PIR) investigator workshop held Oct. 26.

The birth of “Engaging the Public in Research (EPR) Week,” coincided with the 10th anniversary of COPR, a federal advisory committee consisting of 21 members from across the country who make recommendations to the NIH director in the interest of the public and who inform the public about NIH programs and projects. EPR week was co-sponsored by the NIH Office of the Director’s Public Trust Initiative (PTI) and COPR.

The PIR workshop kicked off EPR week. In opening remarks, Grady referred to the establishment of PTI and the subsequent development of the Partners in Research as “ground-breaking initiatives.”

Dr. Yvonne Maddox, deputy director of the National Institute of Child Health and Human Development (and co-leader of PTI, with Grady), provided an overview of the PIR program. She noted that by the end of September 2008, 74 community-based research grants with broad geographical and NIH institute representation were awarded. She also described the purpose of the workshop—to allow participants to share their experiences with NIH as well as other workshop participants and provide an opportunity for them to network. In a lighter moment, she compared the excitement of community-

based research to having a baby, “something our institute knows a little something about.”

Following introductory activities on Oct. 26, which included a tour of NIH and a grant-writing mini-workshop, the afternoon session began with the PIR investigators’ workshop. Dr. Raynard Kington, NIH principal deputy director, welcomed PIR grantees and introduced guest speaker Dr. Howard Koh, HHS assistant secretary for health.

Koh echoed the sentiments of earlier speakers by saying that working with communities in partnerships is “where we must go in this country.” Prior to his HHS appointment, Koh spent 6 years at Harvard University engaged in community-based research. He noted that his career has exposed him to much suffering and death that could have been prevented. “The answer must lie in a community-based health solution,” he insisted.

Involving the people for whom biomedical and behavioral research efforts are designed was the overriding theme of EPR week. Moving the focus of the event from grantees to NIH intramural and extramural program staff, COPR co-hosted the Staff Training in Extramural Programs (STEP) forum, “Nuts-and-Bolts of Community Engagement in Research.” Kington opened the forum with a charge to the audience to be inspired to “come up with novel ways NIH can expand this effort.” The forum, which highlighted COPR’s recent recommendations on community-engaged research, featured best-practice models in a variety of communities and generated dialogue for future consideration.

An intriguing model was presented by Dr. Francesco Celi of the Clinical Endocrinology Branch, NIDDK, who spoke at the STEP event. He illustrated the logistics, challenges and research objectives his group (which includes both intramural and extramural scientists) faces in an ongoing study utilizing dietary intervention for members of an Amish community in Lancaster County, Pa., who are carriers of a genetic muta-





NINR director Dr. Patricia Grady addresses the Partners in Research investigator workshop.

tion that, when present in two copies, increases the risk of premature cardiac death. Ultimately, he said, the hope is that results may yield novel therapies not only for those afflicted by the rare disease (sitosterolemia), but also for people with other metabolic disorders.

On Oct. 30, the COPR meeting was held, the first since the appointment of Dr. Francis Collins as NIH director. Collins emphasized the importance of integrating research into the community. He said that recent technologies and new tools can give us new ideas that will enable us to understand fundamental biology and uncover the cause of specific diseases. This is currently taking place in the area of hereditary diseases, he added.

Collins also briefly reviewed the “wonderful opportunities” offered by the \$10.4 billion granted to NIH via ARRA, with three basic goals of stimulating the economy, creating ideas and advancing biomedical research.

In offering thanks to three retiring members of COPR, Collins also paid tribute to the late Dr. Ruth Kirschstein for more than 50 years of loyal service to NIH. “We recently lost one of our dearest, most dedicated scientists,” he said.

COPR also heard discussions from several institute directors on public interest topics including comparative effectiveness research, complementary and alternative medicine and international biomedical research initiatives. ①

Seasonal Flu Vaccine Campaign Canceled

An email note to all NIH’ers on Oct. 30 abruptly announced the suspension of the annual “Foil the Flu” campaign at NIH, only 2 weeks into the 3-week schedule. The ORS Occupational Medical Service and Clinical Center Hospital Epidemiology Services, which sponsor the annual inoculations, explain why:

Q: Why do you think demand for the seasonal vaccine was so high this year?

A: Widespread public awareness about H1N1 and the serious nature of influenza infections has had the collateral benefit of improving seasonal influenza vaccine acceptance this year. There may also have been some confusion about the protection offered by the respective vaccines.

Q: What has employee reaction been to the suspension?

A: Employees have generally been understanding and there have been few complaints. Most phone calls after the announcement of the suspension were from employees in high-risk clinical areas inquiring whether they would still be able to receive the vaccine in order to protect their patients.

Q: Has the program ever been suspended in the past?

A: Yes. The program was suspended Dec. 10, 2003 (2 days before the Foil the Flu campaign had ended that year), due to a national shortage of vaccine.

Q: By how much did demand exceed supply of the seasonal vaccine?

A: Based upon the pace at which people were presenting for vaccination when the program was suspended, we likely would have vaccinated another 1,000 employees in addition to the patient-care staff.

Q: When in this Foil the Flu season did you realize that you were going to fall short of seasonal vaccine?

A: This year the volume of flu vaccine administration was markedly ahead of last year’s record-breaking NIH flu vaccination campaign. In the days before the suspension, we realized our volume was getting low and that because of a severe national shortage of seasonal flu vaccine we would soon not be able to replenish our supply. Occupational Medical Service fulfilled its vaccination commitments for that week and the campaign was suspended with just enough doses to vaccinate the health care workers and influenza virus researchers who are required to comply with the influenza vaccine program. We are hopeful that seasonal influenza vaccine will be available again in the coming weeks.

Q: Will this year’s cancellation prompt a larger order for seasonal flu vaccine in 2010?

A: We will most likely order a larger number of doses; fulfillment of our order, however, depends on the national supply

Q: What plans does NIH have to offer 2009 H1N1 flu vaccine to any portion of its workforce?

A: It totally depends on availability. First priorities are to vaccinate staff with patient contact and Clinical Center patients. We are receiving very small shipments of H1N1 vaccine each week and have not finished vaccinating the health care staff.



Above, l:
The island of Lindau provides a picturesque setting for the annual Meeting of Nobel Laureates.

Above, r:
NIGMS-supported graduate students Sarah Bowman (l) and Erika Milczek (r) were honored to talk with chemistry Nobel laureate Richard Ernst.

PHOTOS: ERIKA MILCZEK, SARAH BOWMAN



Nobelists Inspire Young Chemists

By Stephanie Dutchen

The tiny island of Lindau in southern Germany swells with brainpower each summer when hundreds of specially selected graduate students and two dozen Nobel laureates descend for a week of lectures, laughter, science and sauerbraten.

Held every year since 1951 on this postcard-perfect patch of Bavaria a few miles from Switzerland and Austria, the Meeting of Nobel Laureates connects young researchers from around the world with Nobel Prize-winning scientists, as well as with each other. It's the only official Nobel event outside Stockholm. Lectures in the mornings, question-and-answer sessions in the afternoons and networking lunches and dinners encourage what the organizers call "intergenerational" interaction.

The theme of the Lindau meeting alternates on a 3-year schedule. This year's was chemistry, attracting 580 young scientists from 67 countries.

The U.S. delegation included 64 students in their third and fourth years of graduate study. Nominated by their universities and approved by the Lindau council, students attended the conference for free with the support of the Department of Energy, National Science Foundation, Oak Ridge Associated Universities and—for the first time this year—the National Institute of General Medical Sciences.

"This is evidence of our interest in collaborations among science agencies and promoting awareness among American scientists of what's going on globally," said NIGMS chemistry program director John Schwab, who helped select the 15 NIGMS-sponsored students and who accompanied them to Lindau.

Several NIGMS-supported Nobel laureates attended the meeting as well, including Robert Grubbs and Richard Schrock (2005), and Martin Chalfie, Osamu Shimomura and Roger Tsien (2008).

They and other Nobel recipients impressed starstruck students with their accessibility, candid opinions and tales of a dedication to high-quality science, often driven by serendipitous findings.

One of the most popular talks came from Swiss laureate Richard Ernst (1991), who shared his passion for Tibetan art and argued that having interests outside the lab creates better scientists. It was

a message that resonated with young researchers struggling to find a healthy work/life balance.

"It was wonderful to speak to all the Nobel laureates and get life and research advice," said NIH-sponsored attendee Erika Milczek of Emory University.

"It's one thing to hear them give a scientific presentation, but another to interact with them on a personal level," added Yale University student Imran Babar, also an NIH-supported attendee. "They seem bigger than life, but then you see that they're normal people. You hear their stories about the pathways that led them into science in the first place and their success."

The lesson that struck Babar the most was that a career in science is "not focusing on winning the prize but instead on doing good science and being passionate about the journey. If you win the Nobel, that's great, but if not, that's good too, because you're doing what you love."

The scientific talks offered an accessible and inspiring array of topics, from the latest advances in a chemical reaction known as olefin metathesis to climate change and renewable energy. A common theme at the Lindau meetings is the impact of science on society.

Milczek, who studies an enzyme implicated in neurological disorders such as Parkinson's disease and depression, enjoyed learning about topics far afield from her own research. "This was a whole world of chemistry I hadn't been exposed to," she said. "The conference taught me to see more than my small part of the overall puzzle."

For his part, Babar—who studies mice to find out how mutations in microRNAs may contribute to lung cancer—appreciated the broader-spectrum talks, saying, "It was more meaningful to me to be able to hear the perspectives of science as a whole as it interacts with society than some of the very esoteric talks where you had to be getting a Ph.D. in organic chemistry to get something out of it."

Whether attendees were energized by the microscopic or the macroscopic, the meeting inspired many of them to take on some of the biggest scientific challenges the world faces today. "It's impossible to come back from this meeting and not be ready to tackle global warming and genetic mapping and all these problems," said Milczek with a laugh.

Many students were also able to meet the scientists who made the discoveries that underpin their own thesis research or who developed the techniques they now use. Attendee Sarah Bowman was thrilled to have an after-dinner talk with nuclear magnetic resonance (NMR) pioneer Ernst, since she focuses on NMR in her own research.

Bowman also spoke at the conference's closing session alongside laureate Kurt Wüthrich (2002), who did NMR work on the same protein she studies, as well as council president Countess Bettina Bernadotte, whose late father helped establish the Lindau meetings.

Outside the lecture halls, U.S. delegation administrators arranged networking sessions with student groups from India, China, Israel and other countries. In addition to stimulating lively discussions about differences in education and certain universalities in the graduate research experience, the peer-to-peer conversations allowed students to establish a network of contacts and potential future collaborators.

"I've gained I don't know how many Facebook friends," said Babar. "There are scientists I'm now connected with globally who I never would have met."

Milczek said she came back from the meeting with "a real enthusiasm for collaborations" after hearing so many laureates emphasize the contributions of their own colleagues. "My advisor is amazing at establishing international collaborations. I just didn't know everyone thinks it's as important as he does," she said.

Along with a pocketful of business cards, some students returned with new ideas brewing, technical tips to try or a better idea of what they want to focus on in their postdoctoral training. Some gained a new appreciation for communication in science. Others found themselves reinvigorated at a time when their research had been dragging or they'd been thinking about leaving science altogether.

After the meeting, Milczek spent 2 weeks in a collaborator's lab in Italy before returning to Emory. She said she "couldn't shut up" about all the ideas she'd picked up from the conference. Fortunately, she found that her European colleagues shared in her excitement.

If Milczek's experience is any sign, the Lindau meeting will continue to inspire budding scientists for years to come. "I want to stay in research," she said. "I'm really looking forward to getting back in the lab. I've calmed down a little, but I still have energy, excitement, passion." 📍



NINDS's Curfman Retires After 45 Years

By Shannon E. Garnett

Blanche Curfman, a biologist in the NINDS Laboratory of Molecular Medicine and Neuroscience (LMMN), retired on Oct. 2, after 45 years of service—all with NINDS.

Curfman first came to NIH in 1962 as part of her summer internship in the NASA Bioscience Program. Her supervisor wanted Curfman and her fellow student interns to learn about the operations of other federal agencies by touring various facilities and visiting with the agencies' administrators. "NIH and medical research became my goal for employment after that," said Curfman.

In 1964, after graduating from Concordia College in Moorhead, Minn., she reached her goal and joined NIH as a laboratory biologist in the NINDS Infectious Diseases Branch, where she worked for 23 years before moving to LMMN.

During her tenure, Curfman worked on tissue culture studies, animal studies—including non-human primates, rodents, small mammals, cellular DNA, DNA *in situ* hybridization—and immunology studies. "I also have had the opportunity to shape the translational research part of the laboratory by confirming the diagnosis of a fatal brain disease," she said, referring to her work on progressive multifocal leukoencephalopathy (PML). PML is a disease caused by the reactivation of a common virus (called polyomavirus JC or JC virus) in the central nervous system of immune-compromised individuals. According to Curfman, PML is now studied with more prominence throughout the world in hopes of discovering a cure.

"Blanche Curfman impressed everyone with her thoroughly professional approach to her work in the laboratory—always exact, always excellent and always reliable and trustworthy," said LMMN chief Dr. Eugene Major, who worked with Curfman for 22 years. "Almost overshadowing her extraordinary talents in science and lab management was her personal intuitive nature for others, showing concern for her friends and lab mates in a totally selfless way. She has a unique and genuine compassion for people that came through whether she was teaching new techniques to others or guiding new lab arrivals to sites in the Washington area."

Throughout her time at NIH, Curfman received numerous awards and accolades including many NINDS Merit and Special Act or Service Recognition Awards and she co-authored several publications in medical journals. She also witnessed many changes at NIH, both physically and administratively. She served under the administrations of 7 NINDS directors, 2 acting NINDS directors, 9 NIH directors and through 3 name changes to the institute.

"I am truly thankful for the wonderful life that I have shared with many at NIH. I have been able to see the results of some of the contributions to medicine that I was privileged to work on in the laboratory over the years," said Curfman, whose decision to retire was based on achieving the 45-year milestone and her desire to make room for the next generation of scientists. "I know that there are young people who need the opportunity to learn and contribute within the medical research field."

In retirement, Curfman plans to become a docent or guide to welcome visitors to the Washington, D.C., area and encourage them to explore the many attractions the city has to offer. She also plans to read and record books for the visually impaired and for people with dyslexia. "That is so like her and so appropriate," said Major. "Over 45 years she has helped so many at NIH see things that we would have missed if not for her gentle guidance."

Weinberger Wins Zülch Prize

NIMH scientist Dr. Daniel R. Weinberger has won this year's Zülch prize, the premier award for neuroscience research in Europe. The prize, given each year by Germany's Max Planck Society, honors outstanding achievements in basic neurological research.

This year's award cites Weinberger's findings on the causes of psychiatric disease at the molecular level.

It is the first time the award has been given for psychiatric research. Since 1990, the honor has been given annually to two scientists. Weinberger's co-recipient this year is Dr. Florian Holsboer at the Max Planck Institute of

Psychiatry in Munich, also for findings on the causes of psychiatric disease at the molecular level. This is the first time the award has gone to an NIH scientist.

Beginning before the advent of non-invasive functional brain imaging, Weinberger sought to characterize how deficits in cognitive function, such as those associated with schizophrenia, could be traced to anomalies in brain physiology and anatomy. As new technologies for imaging and gene discovery became available, he used them to investigate and identify risk-associated genes and to trace the effects of the protein transcripts of these genes and their variants on neurotransmitter function and brain circuitry. His lab has characterized how many potential schizophrenia susceptibility genes and novel gene transcripts regulate brain processes in cognition and emotion.

The Zülch prize recognizes the seminal nature of Weinberger's work to characterize the abnormalities in brain development and circuitry that underlie the symptoms of schizophrenia and, more recently, to establish how variability in the genes that encode functional components of the brain translates into differences in brain function. Out of this work is emerging a picture of the genetic architecture of the brain and how variability in genes that shape normal brain function can be at the root of disease.

The Zülch prize commemorates German neurologist Dr. Klaus Joachim Zülch, former director of the Cologne department of general neurology at the Max Planck Institute for Brain Research, and is awarded by the Max Planck Society on behalf of a foundation established by Zülch's sister.

FAES Announces Spring Courses

The FAES Graduate School at NIH announces the schedule of courses for the spring 2010 semester. The majority of the evening classes sponsored by the Foundation for Advanced Education in the Sciences will be given on the NIH campus.

Courses are offered in biochemistry, biology, biotechnology (daytime courses), chemistry, immunology, languages, medicine, microbiology, pharmacology, statistics, technology transfer, alternative medicine, MCAT, GRE and courses of general interest. A technology transfer certificate program is also being offered.

It is possible to transfer credits earned to other institutions for degree work, with their approval.

Classes will begin the week of Jan. 25; mail registration ends Dec. 31. An open house will be held Jan. 5 from 4 to 7 p.m. at the FAES Social and Academic Center, 9101 Old Georgetown Rd.); walk-in registration will be accepted then and also Jan. 6-13. Tuition is \$115 per credit hour and courses may be taken for credit or audit. Courses that qualify for institute support as training should be cleared with supervisors and administrative officers as soon as possible. Both the vendor's copy of the training form (SF-182) and the FAES registration form must be submitted at the time of registration. Note that FAES cannot access training forms entered in the NIHTS system; a signed hard copy (vendor's copy of SF-182) is needed in order to process registrations for classes. Asking your institute to pay your tuition is a preliminary step to registration but does not constitute registration with the FAES Graduate School.

Class schedules and course catalogs are available in the graduate school office in Bldg. 60, Suite 230; the Foundation Bookstore in Bldg. 10, Rm. B1L101; and the business office in Bldg. 10, Rm. B1C18. To have a catalog sent, call (301) 496-7976 or visit www.faes.org.



NIMH's Dr. Daniel Weinberger (third from l) accepted the Zülch prize recently. With him are (from l) co-recipient Prof. Florian Holsboer; Anna-Katharina Zülch, daughter of K.J. Zülch, whom the award commemorates; and Peter Gruss, president of the Max Planck Society.

NIDCD Mourns Former Scientific Director Wenthold

Dr. Robert J. Wenthold died Oct. 30 after a 28-month battle with renal cancer. For the past two decades, Wenthold had been a scientist, mentor and administrator with the National Institute on Deafness and Other Communication Disorders.



Wenthold served as NIDCD's scientific director from 1998 through 2008, and was a vital force in helping build the NIDCD intramural program's research foundation in such areas as genetics, molecular and developmental biology, computational modeling and brain imaging. Through his open, understated managerial style, he worked to establish a cadre of expert researchers in the study of communication disorders at NIH while creating a research environment that would foster collaboration, idea-sharing and creativity. On the clinical side, he championed NIDCD's Otolaryngology Research Fellow Program, a program that provides research training under the mentorship of NIDCD scientists and helps move research findings on potential treatments from the laboratory into clinical practice.

"Bob led NIDCD's intramural program with the same skill and know-how he used when he addressed a scientific question in his lab," said NIDCD director Dr. James F. Battey, Jr. "He was methodical. He was insightful. He had a dry wit that kept everyone on their toes. But first and foremost, he was committed to advancing the science and he was extremely effective at doing so. We will miss him as a colleague and a friend."

After receiving his Ph.D. from Indiana University, Wenthold conducted postdoctoral work at NIH, then went on to become a faculty member in the department of neurophysiology at the University of Wisconsin. In 1984, he joined what was then the National Institute of Neurological and Communicative Disorders and Stroke as a senior investigator and, in 1989, moved to NIDCD after its creation.

One of Wenthold's most widely recognized scientific feats occurred that same year, when he cloned a member of the family of receptors for glutamate, a chemical that stimulates neurons in the brain and is important in a host of functions, including hearing, learning and memory.

The following year, he developed the first antibodies to these receptors as a useful tool for studying their properties.

"Essentially every neuron in the brain expresses at least one of these receptors, and most express many," he said. "So anybody studying any aspect of the brain is going to be interested in glutamate receptors."

He was right. His landmark 1992 paper in the *Journal of Biological Chemistry* made him a household name within the neuroscience community and his lab soon became the number 1 laboratory in the world for developing and characterizing these antibodies. Since 1996, Wenthold led NIDCD's Laboratory of Neurochemistry as well as its section on neurotransmitter receptor biology, which continues to study the assembly, trafficking and synaptic expression of glutamate receptors.

Perhaps Wenthold's most lasting legacy will be his role in training and mentoring the next wave of young researchers. Many of the field's top scientists point to his leadership in helping them launch their scientific careers.

Wenthold initiated NIDCD's collaborative program with the University of Maryland, which provides graduate students with research experience in NIDCD laboratories and served as a model for NIH's Graduate Partnerships Program (GPP). As a testament to his leadership, he was presented GPP's Outstanding Mentor Award in November 2008.

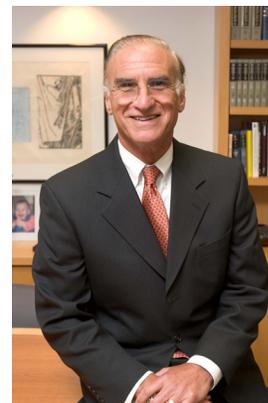
"He inspired me to pursue my Ph.D.," said Dr. Philip Wang, an NIDCD postdoctoral researcher who has studied with Wenthold ever since he received his bachelor's degree at the University of Virginia and who nominated Wenthold for the award.

"He was always extremely busy, but his door was wide open to us, no matter what," said Wang. "Bob loved science. Whenever I had new slides to look at, he'd enthusiastically join me in the microscope room to view them with me. I always looked forward to having new data so that I would be able to spend that personal time with him."

Wenthold is survived by his wife of 38 years, Kris, his son Robert Jr., daughter Elisabeth Lucas, granddaughter Marissa, and sisters Phyllis Arendt and Mary Ann Mahaffey, along with other family members. Donations can be made in his name to the Patient Emergency Fund, Social Work Department, NIH Clinical Center, 10 Center Dr., Rm. 2-3-581. NIDCD is planning a neuroscience seminar in his honor, details of which will be announced later. 🗨

Kahn To Give Falk Lecture at NIEHS

The NIEHS 2008–2009 Distinguished Lecture Series continues on Tuesday, Dec. 8 with the annual Hans L. Falk Memorial Lecture. The lecturer this year is Dr. C. Ronald Kahn, who will speak on "Genes and Environment in the Epidemic of Diabetes and Obesity." The lecture will begin at 11 a.m. in Rodbell Auditorium at NIEHS. Kahn is senior investigator and head of the section on obesity and hormone action, the Mary K. Iacocca professor of medicine at Harvard Medical School and vice chairman of the board, Joslin Diabetes Center, Boston. His principal research interests involve understanding the mechanism of action of insulin and related growth factors at a molecular level and defining at a molecular and physiologic level the defects that underlie human diabetes mellitus. The Kahn lab has also found interesting links between SIRT1-3 and the control of metabolism and longevity. During his visit he will meet with investigators, students and fellows to discuss issues of common interest. He will also deliver a second lecture on Wednesday, Dec. 9, when he will present his own current research in a seminar designed for specialists in his field.



More Clues to How Language Evolved

Your ability to make sense of Groucho's words and Harpo's pantomimes in an old Marx Brothers movie takes place in the same regions of

your brain, says new research funded by the National Institute on Deafness and Other Communication Disorders. In a study published in Nov. 9's early edition of *Proceedings of the National Academy of Sciences*, researchers have shown that the brain regions that have long been recognized as a center in which spoken or written words are decoded are also important in interpreting wordless gestures. The findings suggest that these brain regions may play a much broader role in the interpretation of symbols than researchers

have thought and, for this reason, could be the evolutionary starting point from which language originated.

Scientists have known that sign language is largely processed in the same regions of the brain as spoken language. These regions include the inferior frontal gyrus, or Broca's area, in the front left side of the brain, and the posterior temporal region, commonly referred to as Wernicke's area, toward the back left side of the brain. In this study, NIDCD researchers collaborated with scientists from Hofstra University School of Medicine and San Diego State University.

"In babies, the ability to communicate through gestures precedes spoken language, and you can predict a child's language skills based on the repertoire of his or her gestures during those early months," said NIDCD director Dr. James Battey. "These findings not only provide compelling evidence regarding where language may have come from, they help explain the interplay that exists between language and gesture as children develop their language skills."

One Dose of H1N1 Flu Vac Prompts Strong Response by Pregnant Women

Healthy pregnant women mount a robust immune response following just one dose of

2009 H1N1 influenza vaccine, according to initial results from an ongoing clinical trial sponsored by the National Institute of Allergy and Infectious Diseases. A preliminary analysis of blood samples taken 21 days post-vaccination from a subgroup of 50 pregnant women participating in the trial shows the following:

- In 25 women who received a single 15-microgram dose of the vaccine, the H1N1 flu vaccine elicited an immune response likely to be protective in 92 percent of these women.
- In 25 women who received a single 30-microgram dose of the vaccine, the H1N1 flu vaccine elicited an immune response likely to be protective in 96 percent of these women.

The trial began on Sept. 9. Safety is being monitored closely by study investigators and by an independent expert safety monitoring committee. To date, the vaccine appears to be well-tolerated and no safety concerns related to the vaccine have arisen.

Speaking of Flu: New Explanation Offered for Virus 'Shape-Shifting'

Influenza viruses evade infection-fighting antibodies by constantly changing the shape of their major surface protein. This shape-shifting, called antigenic drift, is why influenza vaccines—which are designed to elicit antibodies matched to each year's circulating virus strains—must be reformulated annually.

Now, NIAID researchers have proposed a new explanation for the evolutionary forces that drive antigenic drift. The findings in mice, using a strain of seasonal influenza virus first isolated in 1934, also suggest that antigenic drift might be slowed by increasing the number of children vaccinated against influenza. Drs. Scott Hensley, Jonathan Yewdell and Jack Bennink led the research team, whose findings appeared in the Oct. 30 issue of *Science*.

According to the prevailing theory, drift occurs as the virus is passed from person to person and is exposed to differing antibody attacks at each stop. With varying success, antibodies recognize one or more of the four antigenic regions in hemagglutinin, the major outer coat protein of the flu virus. Antibodies in person A, for example, may mount an attack in which antibodies focus on a single antigenic region. Mutant viruses that arise in person A can escape antibodies by replacing one critical amino acid in this antigen region. These mutant viruses survive, multiply and are passed to person B, where the process is repeated.—**compiled by Carla Garnett**



Researchers funded by NIDCD have shown that the brain regions that have long been recognized as a center in which spoken or written words are decoded are also important in interpreting wordless gestures.



feedback

Have a question about some aspect of working at NIH? You can post anonymous queries at www.nih.gov/nihrecord/index.htm (click on the Feedback icon) and we'll try to provide answers.

Feedback: Can we have Watch for Wildlife signs posted at conspicuous locations on campus? We have a lot of wildlife on and around our roads and a lot of people may not realize that they can come upon them abruptly or that some, like the Canada goose, are protected.

Response: The Office of Research Facilities has ordered deer crossing signs to be posted in specific locations warning motorists. However, for the geese, there are no in-stock, standard signs. ORF is working with a sign company to design a goose crossing sign to put up near each vehicle entrance. The signs will be posted before next spring's influx of birds.

Feedback: The NIH shuttle bus shelter at the Metro entrance is often filthy with trash and cigarette butts. The tiny trash can doesn't get emptied regularly. While other Metro shelters are kept cleaner, what makes this shelter at the nation's premier health agency less fortunate?

Response: Thank you for alerting us to this problem. The Office of Research Services and the Office of Research Facilities are addressing the situation and the shelter (outside of the fence) will be routinely maintained including picking up ground litter and emptying the trash several times a week. All the other shelters outside of the fence are the responsibility of the Washington Metropolitan Area Transit Authority (WMATA). We are working with WMATA on their responsibilities for maintenance and cleanliness of their shelters. In the future, if you see issues with our bus shelter, you can report them to Louise Davis at davislou@mail.nih.gov or (301) 496-9621.

Feedback: I work in Bldg. 49 on campus and ride my bike to work. I often ride on the service road next to the NIH Utility Plant. When I ride here, I almost always feel a mist or even drops of water falling on me from above. There is also a strange smell associated with the same area. I am very curious to know what this liquid is and whether it is safe, or potentially hazardous, to have falling on me.

Response from ORF: The mist you are feeling is indeed water drops drifting from cooling towers located on the roof of Bldg. 11, the NIH power plant. The water is not hazardous. The odor you have noticed is coming from exhaust vents at nearby animal facilities and is unrelated to the water droplets.

STEP Forum on Headaches

The staff training in extramural programs (STEP) committee will present a Science for All forum on the topic "Oh, My Achy-Breaky Head: The Latest Science and Management of Headaches," on Tuesday, Dec. 15, from 8:30 a.m. to 12:30 p.m. in Lister Hill Auditorium, Bldg. 38A.

Have you had a headache lately? If so, you are one of millions of Americans who suffer from this malady. In fact, headaches are a major cause of absenteeism and loss of productivity. There are several types, including migraine and tension headaches. This forum will discuss the latest scientific advances in understanding the underlying mechanisms of headaches, new research approaches and therapeutic modalities. It will also explore ways to recognize, prevent and manage headaches.



volunteers

Volunteers Needed for Flu Study

Doctors at NIAID are conducting a study that will look at aspects of influenza infection. Volunteers must be older than 2, have a positive clinical diagnostic test for the flu within the past 2 months and be able to safely undergo blood draws as well as nasal washes. Volunteers will be compensated for their participation. Study visits will occur at the Clinical Center. Participants will be asked questions (parents can answer for children), have a physical exam and have nasal secretions and/or blood collected. Depending on when you were diagnosed with the flu, you may be asked to make 2-7 visits over a 1-month period. For more information, contact Jocelyn Voell, (301) 435-7913, or Charles Fiorentino, (301) 443-5447.

People with Memory Problems Needed

The Mood & Anxiety Disorders Program, NIMH, is looking for people suffering from mild to moderate memory problems that are getting worse with time. Participants should be older than 45 years of age and be accompanied by someone who knows them well. Participants should not already have a diagnosis of a brain disorder, with the exception of Alzheimer's disease or minor cognitive impairment. Study procedures may include MRI and PET scans, neurological examination and neuropsychological testing. Four outpatient visits to the Clinical Center are required. Call 1-866-MAP-NIMH (627-6464) for more information. Refer to study 09-M-0198.

Chamber Singers Make Beautiful Music Together

By Valerie Lambros

NIH'ers tend to be talented people. Whether it's creating fine crafts, shooting gorgeous photography or excelling in a variety of sports, there's no shortage of extracurricular skill going around.

The same goes for musical talent, particularly singing. Founded as an R&W club 15 years ago, the NIH Chamber Singers is now a 17-member choral group that performs works ranging from Bach to the Beatles, and does its best to do justice to all types of music.

Singers are not only fellows and employees of FDA and NIH, but also NIH alumni and a few others drafted into the group, such as conductor Dwight Brock's wife, Mary, and daughter, Shelley Roth, the group's pianist for the few pieces they perform that aren't sung *a cappella*.

"Once most of the venues where the group performs got functional pianos, I became pretty much the 'hired help' for pieces with piano accompaniment," Roth said. But it's not a bad deal. "Dad sometimes pays me in wine for my services. Works for me."

Other members' backgrounds are similarly varied. There's the FDA scientist who works on regenerative medicine, the senior investigator from NCI who's sung in a women's barber shop group and the NIMH fellow whose musical resumé includes singing in a chamber choir, on stage in musicals and even in a gospel group. Nearly everyone has some sort of funny story about how they came to be a part of the group, but most stories are something like Ken Kirk's.

"I first became aware of the chamber singers by attending a few concerts in the late 1990s," he said. Kirk sang in a church choir and was tempted to audition for the chamber group, but for a while thought better of it. "This group was so good that any thought of joining was, in my mind, out of the question."

Fortunately, Kirk was also a member of another R&W club at the time, the NIH Sailing Association. At a club party, some singing started and one member suggested Kirk give the chamber singers a try.

"So I decided to do it," he said. "My rendition of *Back Home Again in Indiana* surprisingly got me in."

It was a fortuitous chain of events, not only for Kirk, but also for the group. Prior to the attacks of 9/11, the NIH campus—as many people know—had been an open stretch of real estate



Above, Dwight Brock (r) discusses a piece of music with the group.

At right, Ken Kirk practices his flute for a piece on the holiday program.

The Chamber Singers plan an NIH concert at noon on Wednesday, Dec. 9 in the CRC atrium. Other area concerts will be at 1 p.m. Dec. 5 at Potomac Library, 7 p.m. Dec. 10 at Twinbrook Library and 1:30 p.m. Dec. 13 at North Chevy Chase Christian Church.

PHOTOS: VALERIE LAMBROS



with no fence and no visitor registration. That all changed, and so did the group's regular meeting space, Masur Auditorium, once new regulations were put in place and the perimeter fence went up.

Unable to meet regularly on campus in an area with a piano, the group shifted to the Brocks' church. But the location of the church, 15 to 20 minutes from campus in rush-hour traffic, made meeting unwieldy. Enter Kirk, who had recently moved into a new home just off campus and had an upright piano in his ample living room. Problem solved. Every Tuesday night, the house fills with sound and Kirk's gray cat even gets in on the action now and then.

"Sushi the cat has been with the group since we came over here," he said. "Occasionally, she hides from the din."

Even with fewer than 20 singers, the group is able to perform some technically demanding material, often requiring members to sing 6- or 8-part harmonies.

"Rediscovering the joy of making music after many years away is a wonderful experience," said Dr. Marjorie Guroff of NCI. Though music was always a big part of her life, something had to give in her postdoc years when she was already burdened with the responsibilities of family life and a career in science. With her children grown, Guroff found she had time for music again and joined the chamber group 5 years ago.

"I've always loved close harmony, and especially singing in a small group format where every voice plays an important part," she said. "The music the singers perform spans hundreds of years, and I've enjoyed the exposure to music I might never have discovered on my own. After an hour of singing, it's impossible to leave a practice with anything but a light heart."

Of course, rehearsals are nothing without a reason to perform, so the NIH Chamber Singers hold concerts in the spring and during the holiday season. The singers will offer four concerts in early December, including a Dec. 9 performance in the Clinical Research Center's atrium. The program consists of sacred and secular Christmas and Hanukkah selections from a variety of countries and musical traditions, including early and 20th century American, German and British cultures.

In keeping with its insistence on variety, the program will also include a rowdy, Cockney-accented caroling piece and an 8-part *Hark, Now, O Shepherds*, as well as the beautiful *Ave Maria* of Franz Biebl performed by the group's men and selections from Benjamin Britten's *A Ceremony of Carols* performed by the women. 🎵